



**CONESTOGA-ROVERS  
& ASSOCIATES**



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September 28, 2010

Reference No. 006029-50

Mr. Regan S. Williams  
State Project Coordinator  
Ohio EPA  
Division of Emergency & Remedial Response  
2110 East Aurora Road  
Twinsburg, Ohio 44087

Dear Mr. Williams:

Re: June 2010 Groundwater Monitoring Report  
Summit National Superfund Site  
Deerfield, Ohio

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In accordance with the Consent Decree and Statement of Work (SOW) requirements for the Summit National Superfund Site (Site) in Deerfield, Ohio, the Summit National Facility Trust (SNFT) herewith submits two copies of the results of the June 2010 annual groundwater monitoring event at the Site, in accordance with the revised groundwater monitoring schedule provided in the April 2009 Groundwater Monitoring Report (Conestoga-Rovers & Associates [CRA], September 2, 2009), as amended in the responses to the Ohio Environmental Protection Agency (OEPA) January 6, 2010 comments (CRA, March 26, 2010). The groundwater sampling was conducted on June 2, 2010, and a full round of groundwater level measurements was obtained on the same day, prior to commencing the sampling program.

#### **A. GROUNDWATER QUALITY MONITORING**

As proposed in the April 2009 Groundwater Monitoring Report and the March 2010 responses to OEPA comments, the June 2010 groundwater sampling event included sampling of the following groundwater monitoring wells:

1. Water Table Unit (WTU) wells:
  - On-Site wells: MW-11, MW-107, MW-108, and MW-111
  - Off-Site downgradient wells: MW-4, MW-113, MW-114, and MW-115
2. Upper Intermediate Unit (UIU) wells:
  - On-Site wells: MW-207
  - Off-Site downgradient wells: MW-209, MW-220, and MW-224

The samples were analyzed by Accutest of Dayton, New Jersey, for the Site-Specific Indicator Parameter List (SSIPL) of compounds provided in **Table 1**.

**Attachment A** is a memorandum summarizing the groundwater monitoring field activities for the June 2010 groundwater monitoring event. Four of the eight WTU wells, and all four UIU wells, were purged dry. All wells recovered sufficiently for complete sample sets to be obtained. The fact that these wells purged dry is indicative that there is limited groundwater movement in these groundwater units.



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**Attachment B** presents a summary of the analytical results for the detected compounds in the groundwater, surface water, and sediment samples collected in June 2010, as follows:

**Tables in  
Attachment B**

**Analytical Results**

Table B.1	WTU Monitoring Wells
Table B.2	UIU Monitoring Wells
Table B.3	Surface Water Samples
Table B.4	Sediment Sample
Table B.5	Rinse Blanks
Table B.6	Trip Blank

CRA's data quality assessment for the June 2010 analyses is included in **Attachment C**. The groundwater data was determined to be usable with the qualifications noted in **Attachment C**.

A summary of the SSIPL compounds (see **Table 1**) detected in the WTU and UIU groundwater samples for the sampling events conducted from 2004 to 2010 are presented on attached **Figures 1 and 2**, respectively. Trends in the WTU and UIU are discussed below.

**WTU Trends – On-Site Wells:**

The concentrations of SSIPL compounds are expected to fluctuate from year to year on Site. No order of magnitude SSIPL concentration changes were noted in on-Site monitoring wells MW-107, MW-108, MW-11, MW-111, and MW-113. There were some increasing and decreasing concentration changes in all the wells, but no significant changes outside of typical fluctuations were identified. The concentrations at MW-108 continue to show an increasing trend since the shutdown of the groundwater extraction system in 2005, consistent with the statistical trend evaluation provided in the 2009 groundwater monitoring report.

**WTU Trends – Off-Site Wells:**

SSIPL concentrations have remained non-detect at MW-4 and MW-114. Low concentrations of 1,1-DCA, 1,2-Dichloroethane (1,2-DCA), 1,2-Dichloroethene (1,2-DCE), and cis-1,2-Dichloroethene (cis-1,2-DCE) were detected in MW-115, but remain within the range of concentrations detected since 2004, and are lower than the concentrations reported in April 2009.





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#### UIU Trends – On-Site Wells:

SSIPL concentrations in on-Site monitoring wells MW-207 and MW-224 continue to be non-detect.

#### UIU Trends – Off-Site Wells:

The only SSIPL compound detected in the off-Site wells was acetone at MW-209 and MW-220.

At MW-209, the concentration of acetone has fluctuated between 3.2 micrograms per liter ( $\mu\text{g/L}$ ) and 18.8  $\mu\text{g/L}$  over the period of 2004 to 2009. In April 2009, the concentration of acetone was 14.4  $\mu\text{g/L}$ . The 9.6/9.1  $\mu\text{g/L}$  of acetone (original/duplicate sample) in June 2010 is within the range of detections over the last 6 years.

At MW-220, the concentration of acetone has fluctuated between non-detect at a detection limit of 5.0  $\mu\text{g/L}$  [ND(5.0)] and 23.5  $\mu\text{g/L}$  over the period of 2004 to 2009. In April 2009, the concentration of acetone was ND(5.0). The 13.8  $\mu\text{g/L}$  of acetone in June 2010 is within the range of detections over the last 6 years.

### **B. GROUNDWATER HYDRAULIC MONITORING**

Groundwater levels in the WTU, UIU, Lower Intermediate Unit (LIU), and Upper Sharon Unit (USU) monitoring wells and piezometers at the Site were measured on June 2, 2010, and are presented in **Attachment D**. **Attachment D** (Table D.1) also includes the groundwater levels measured in the monitoring wells since 2004 (the year prior to shutdown of the groundwater extraction and treatment system). The groundwater hydraulic data was reduced to elevations and entered into a computer database as required by the SOW. Groundwater contours for the June 2010 groundwater hydraulic monitoring event are presented on figures in **Attachment D**.

The groundwater elevation contours for the June 2010 hydraulic monitoring demonstrate that the horizontal direction of groundwater flow is generally southeasterly in the WTU, as has been consistently observed in the past. The groundwater flow direction in the UIU bedrock unit appears to be in a generally easterly direction, and is consistent with the pre-shutdown groundwater flow direction in this unit.



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### **C. SURFACE WATER AND SEDIMENT SAMPLING**

The annual surface water and sediment samples were collected from the confluence of the south and east drainage ditches in June 2010. The analytical results of detected SSIPL compounds in the surface water samples are provided in Table B.3, and the results of the sediment sample are provided in Table B.4 of **Attachment B**.

No semi-volatile organic compounds (SVOCs) were detected in the surface water sample. The only volatile organic compounds (VOCs) detected in the surface water sample were cis-1,2-DCE at 0.28J µg/L, and acetone at 7.3/6.7 µg/L. The concentration of cis-1,2-DCE is lower than previous detects of cis-1,2-DCE at this location. Acetone has not previously been detected at this location.

No VOCs were detected in the sediment sample. Of the 11 SVOC compounds detected in the sediment sample, only one compound (Dimethyl phthalate) exceeded the 2004 (pre-shutdown) concentration.

At the time of sampling at the confluence of the south and east drainage ditches, the water levels in the ditches were high and no orange staining on the exposed banks of the ditches were evident.

The next annual surface water and sediment samples will be collected during the April 2011 sampling event.

### **D. DISCUSSION**

Except for the expected increasing groundwater levels in the vicinity of the pipe and media drain after shutdown of the groundwater extraction system in August 2005, no significant changes in the groundwater flow patterns have been noted since the system shutdown. Groundwater concentrations in downgradient off-Site monitoring wells have remained either non-detect or similar to the concentrations detected since 2004 (baseline sampling event for the shutdown evaluation). The increasing concentration trend at on-Site monitoring well MW-108 was extensively evaluated in the 2009 groundwater monitoring report (CRA, September 2, 2009). The 2010 analytical data indicate that this trend is continuing. However, these parameters all appear to be well-contained inside the Site boundary.

The contingency actions outlined in the April 2009 Groundwater Monitoring Report (CRA, September 2, 2009), as amended in the responses to the OEPA January 6, 2010 comments (CRA, March 26, 2010) are as follows:



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"If VOCs above their respective maximum contaminant level (MCL) are detected in the Sentinel wells (off-Site downgradient WTU monitoring wells MW-114 and MW-115), SNFT will evaluate options to mitigate the release (e.g., restart the groundwater extraction system, implement in-situ chemical oxidation (ISCO) to treat the released groundwater, phytoremediation, etc.). The Sentinel wells are located 70 to 80 feet south of the southern property boundary and wet well of the pipe and media drain. During pumping of groundwater from the pipe and media drain, the WTU zone of groundwater capture extends 100 to 200 feet south of the pipe and media drain at the wet well. In this case, off-Site downgradient WTU monitoring wells MW-116, MW-117 and MW-118 (approximately 230 feet south of the southern property boundary) will be used to verify whether there is any long term impact to the groundwater south of the Site and outside the influence of the pipe and media drain".

As the detected VOC concentrations at Sentinel wells MW-114 and MW-115 are below their MCLs, no contingency actions are required based on the June 2010 groundwater monitoring data, and therefore the groundwater extraction system will remain off pending the results of the April 2011 groundwater sampling event.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES, INC.

Steve Whillier

SW/rrw/Will-064

Encl.

cc: Pablo Valentin, USEPA (2 hardcopies, 1 e-copy)  
Robert Casselberry, SNFT (1 hardcopy, 1 e-copy)  
Jeff Sussman, SNFT (1 hardcopy, 1 e-copy)  
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Jack Michels, CRA (e-copy)  
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## FIGURES







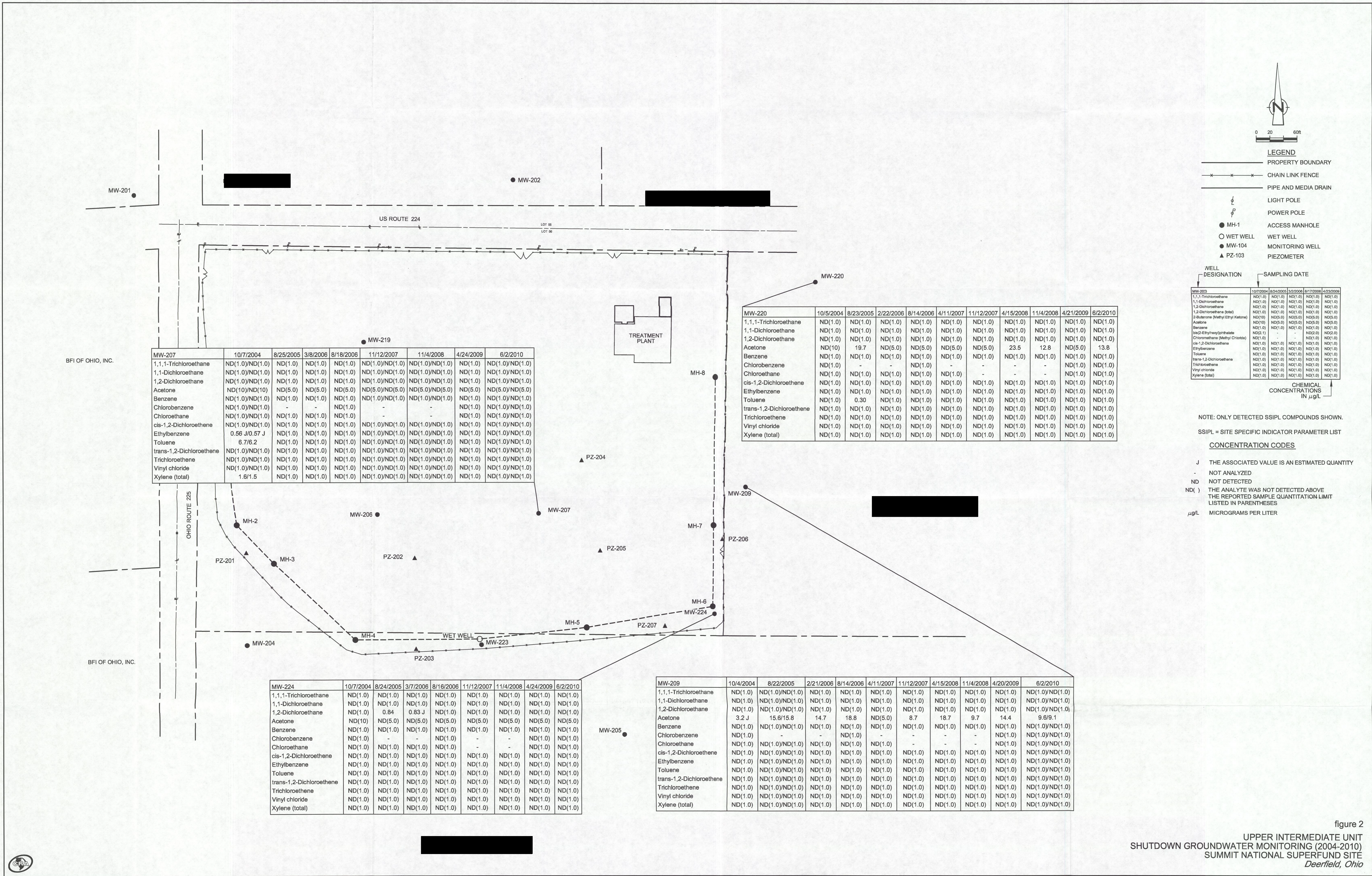


figure 2  
UPPER INTERMEDIATE UNIT  
SHUTDOWN GROUNDWATER MONITORING (2004-2010)  
SUMMIT NATIONAL SUPERFUND SITE  
Deerfield, Ohio



## TABLE

**TABLE 1**

**SITE-SPECIFIC INDICATOR PARAMETER LIST (2010 – 2013)  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD, OHIO**

***Volatile Organic Compounds (VOCs)***

1,1,1-Trichloroethane  
1,1-Dichloroethane  
1,2-Dichloroethane  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
Acetone  
Benzene  
Chlorobenzene  
Chloroethane  
Ethylbenzene  
Toluene  
Trichloroethene  
Vinyl Chloride  
Xylenes, Total



**ATTACHMENT A**

**GROUNDWATER MONITORING FIELD ACTIVITIES  
SUMMARY JUNE 2010**



**CONESTOGA-ROVERS  
& ASSOCIATES**

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## MEMORANDUM

*Sent via email*

TO: Stephen Whillier  
FROM: David Tyran/adh/2 *DST*  
RE: Post Shutdown Hydraulic Monitoring and Groundwater Quality Monitoring  
June 2010  
Summit National Superfund Site  
Deerfield Township of Portage County, Ohio

REF. NO.: 006029-50  
DATE: June 9, 2010

The following is a brief summary of the Site activities associated with the June 2010 round of groundwater sampling conducted on June 2, 2010 at the Summit National Superfund Site (Site) in Deerfield Township of Portage County, Ohio.

### On-Site Personnel

Field activities were conducted by Conestoga-Rovers & Associates' (CRA's) Shawn Gardner and Dave Tyran.

### Water Levels

A round of water level readings was taken from all on-Site and off-Site monitoring wells on June 2, 2010, using a Solinst electronic water level tape. The water level tape was decontaminated between water level measurements at each monitoring well. The decontamination sequence involved first rinsing the tape with potable water and final rinsing with deionized water.

### Purging and Sampling of Monitoring Wells

During purging of all monitoring wells, readings of specific conductivity, temperature, and turbidity (dependent on field observations) were taken after the removal of each standing well volume. A summary of the well purge data is provided in Table 1. The quality of the evacuated water was also noted for color and clarity. All purge waters (approximately 140 gallons) from the monitoring wells were containerized in three steel 55-gallon drums for later disposal off Site.

Once the monitoring wells were purged, groundwater samples were collected for analyses of the Site-Specific Indicator Parameter List (SSIPL) for volatile organic compounds (VOCs).

All 12 monitoring wells were purged using either dedicated Waterra foot valves and tubing or an electric Grundfos submersible pump. The wells were sampled using a precleaned stainless steel bailer (as detailed below). Once purging of the monitoring well was completed, the tubing was removed from the well and

drained. The standing water within the well was allowed to settle so that a clear sample could be collected. After sampling of the well was completed, the tubing was placed back down the well.

As shown in Table 1, 8 out of the 12 wells were purged dry and then allowed to recover so a complete sample set could be taken. The remaining four wells had sufficient recharge to allow for stabilization by purging three or more volumes.

Collected samples were labeled and placed in a cooler and maintained cool with ice. The samples were shipped by Federal Express to Accutest Laboratories in Dayton, New Jersey, under Chain of Custody protocols.

#### Decontamination Procedures

Stainless steel bailers were cleaned between monitoring wells by using the following decontamination sequence:

- i) Clean with brush in potable water and Alconox detergent
- ii) Rinse thoroughly with potable water
- iii) Rinse thoroughly with deionized water
- iv) Allow the bailer to air dry on clean aluminum foil

#### Field Quality Assurance/Quality Control (QA/QC) Program

Field QA/QC samples collected during the June 2010 round of groundwater sampling included two blind field duplicates and two stainless steel bailer rinsate blanks. One matrix spike and matrix spike duplicate (MS/MSDs) was also collected. One trip blank was sent with the shipment of samples to the laboratory by placing all VOC samples in the same cooler with the trip blank.

Stainless steel bailer rinsate blanks were collected by pouring lab supplied deionized water into a precleaned bailer and then filling the sample containers.

#### Sediment Sample

A sediment sample was collected at the confluence of the south and east ditches. This sample was analyzed for VOCs and semi-volatile organic compounds (SVOCs). Due to extremely high water in the impoundment area - over 4 feet on the staff gauge - it was necessary to take the sediment sample close to the bank. This location is only several feet off of the southeast fence corner.

#### Surface Water

A surface water sample was collected at the confluence of the south and east ditches. This sample was obtained by attaching a clean amber jar to a telescoping pole and dipping the jar at the approximate confluence point and then pouring off the water into labeled sample jars. The sample was analyzed for VOCs and SVOCs.

**Wastewater**

At the conclusion of the sampling round, a wastewater composite sample was taken from the three drums of purge water for characterization prior to disposal.

TABLE 1

SUMMARY OF MONITORING WELL PURGE DATA  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO  
JUNE 2010

Well I.D.	Date Purged/ Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity (mS/cm)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW-4	06/02/10 06/02/10	11.8	11.8 Sample	11:42 18:00	3.35	6.50	13.19	14.9	Clear, colorless Clear, colorless	Grundfos/SS bailer for all parameters	Well dry @ 1 volume
MW-11	06/02/10	2.8	2.8 5.6 8.4 11.2 Sample	12:35 12:38 12:41 12:44 17:50	3.17 2.83 2.74 2.67	6.13 6.31 6.34 6.33	11.36 11.28 11.16 10.99	3.4 1.1 4.5 0.5	Clear, colorless Clear, colorless Clear, colorless Clear, colorless Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
MW-107	06/02/10	3.4	3.4 6.8 10.2 Sample	14:56 14:59 15:02 16:30	3.39 3.39 3.39	6.51 6.63 6.75	12.47 12.04 12.51	24.1 5.5 7.1	Clear, colorless, strong chemical odor Clear, colorless, strong chemical odor Clear, colorless, strong chemical odor Clear, colorless, strong chemical odor	Waterra/SS bailer for all parameters	Good recharge
MW-108	06/02/10	2.1	2.1 4.2 6.3 Sample	12:03 12:05 12:07 16:20	2.22 2.38 2.45	6.76 6.55 6.51	12.31 10.20 10.10	96.2 82.6 56.7	Slightly cloudy, light brown Slightly cloudy, light brown Slightly cloudy, light brown Slightly cloudy, light brown	Waterra/SS bailer for all parameters	Well dry @ 8.1 gallons
MW-111	06/02/10	2.6	2.6 5.2 7.8 Sample	12:20 12:22 12:24 17:20	4.33 4.36 4.34	5.95 5.87 5.84	12.28 11.79 12.30	12.3 1.0 1.9	Clear, colorless, light brown tint Clear, colorless, light brown tint Clear, colorless, light brown tint Clear, colorless, light brown tint	Waterra/SS bailer for all parameters	Good recharge
MW-113	06/02/10	1.9	1.9 Sample	11:54 17:30	4.07	6.94	12.57	115.2	Cloudy, dark gray Clear, colorless	Waterra/SS bailer	Well dry @ 3.5 gallons
MW-114	06/02/10	2.2	2.2 Sample	10:48 17:40	2.89	6.48	10.84	52.6	Slightly cloudy, red brown Slightly cloudy, light brown	Waterra/SS bailer for all parameters	Well dry @ 3.8 gallons

TABLE 1

**SUMMARY OF MONITORING WELL PURGE DATA  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO  
JUNE 2010**

<i>Well I.D.</i>	<i>Date Purged/ Sampled</i>	<i>Well Volume (Gallons)</i>	<i>Purged Volume (Gallons)</i>	<i>Time</i>	<i>Conductivity (µs/cm)</i>	<i>pH</i>	<i>Temperature (°C)</i>	<i>Turbidity (NTU)</i>	<i>Water Quality</i>	<i>Purge/Sampling Method</i>	<i>Comments</i>
MW-115	06/02/10	3.9	3.9	10:30	2.57	6.02	13.07	1.7	Clear, colorless	Grundfos/SS bailer for all parameters	Good recharge
			7.8	10:32	2.58	6.04	12.91	0.5	Clear, colorless		
			11.7	10:33	2.57	6.05	12.76	0.2	Clear, colorless		
			Sample	18:10					Clear, light brown tint		
MW-207	06/02/10	6.3	6.3	14:44	3.78	6.92	12.37	44.9	Clear, colorless	Grundfos/SS bailer for all parameters	Well dry @ 14 gallons
			12.6	14:46	3.81	6.42	12.03	150.2	Cloudy gray		
			Sample	18:20					Clear, colorless		
MW-209	06/02/10	5.2	5.2	11:27	3.78	6.26	12.02	22.7	Clear, colorless	Grundfos/SS bailer	Well dry @ 8.3 gallons
			Sample	16:40					Clear, colorless		
MW-220	06/02/10	5.0	5.0	11:06	4.20	6.83	12.16	1.2	Clear, colorless	Grundfos/SS bailer	Well dry @ 8.1 gallons
			Sample	15:50					Clear, colorless		
MW-224	06/02/10	4.0	4.0	13:34	3.70	6.90	12.95	3.9	Clear, colorless	Grundfos/SS bailer for all parameters	Well dry @ 14.2 gallons
			8.0	13:36	3.69	6.91	11.98	2.7	Clear, colorless		
			12.0	13:37	3.68	6.89	12.27	3.2	Clear, colorless		
			Sample	16:10					Clear, colorless		
Surface Water	06/02/10		Sample	18:05	0.49	8.48	22.14	232	Cloudy brown		Confluence of south and east ditches

## Notes:

NM - Not measured

SS - Stainless Steel.

**ATTACHMENT B**

**ANALYTICAL DATA SUMMARY**

TABLE B.1

ANALYTICAL DATA SUMMARY  
WTU MONITORING WELLS  
JUNE 2010 GROUNDWATER MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD, OHIO

Sample Location	MW-4	MW-11	MW-107	MW-108	MW-111	MW-113	MW-114	MW-115
Sample ID	WG-6029-060210-012	WG-6029-060210-011	WG-6029-060210-004	WG-6029-060210-003	WG-6029-060210-008	WG-6029-060210-010	WG-6029-060210-007	WG-6029-060210-014
Sample Date	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010
<u>Volatile Organic Compounds (µg/L)</u>								
1,1,1-Trichloroethane	ND(1.0)	37.7	122	6.7	2.0	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ND(1.0)	79.3	1,600	244	33.7	ND(1.0)	ND(1.0)	1.9
1,2-Dichloroethane	ND(1.0)	1.3	219	67.7	75.1	ND(1.0)	ND(1.0)	0.44 J
Acetone	ND(5.0)	ND(5.0)	ND(50)	4.1 J	ND(5.0)	3.6 J	ND(5.0)	ND(5.0)
Benzene	ND(1.0)	0.71 J	110	86.9	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ND(1.0)	ND(1.0)	68.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)	1.4	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ND(1.0)	59.2	434	155	7.5	ND(1.0)	ND(1.0)	7.2
Ethylbenzene	ND(1.0)	ND(1.0)	1,240	0.61 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ND(1.0)	ND(1.0)	5,190	0.69 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ND(1.0)	2.4	ND(10)	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ND(1.0)	101	6.7 J	30.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ND(1.0)	5.2	119	76.8	7.0	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ND(1.0)	ND(1.0)	4,090	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

## Notes

µg/L = micrograms per liter

ND ( ) - Not present at or above the associated value

J - Estimated concentration



TABLE B.2

ANALYTICAL DATA SUMMARY  
 UIU MONITORING WELLS  
 JUNE 2010 GROUNDWATER MONITORING EVENT  
 SUMMIT NATIONAL SUPERFUND SITE  
 DEERFIELD, OHIO

<i>Sample Location</i>	<i>MW-207</i>	<i>MW-207</i>	<i>MW-209</i>	<i>MW-209</i>	<i>MW-220</i>	<i>MW-224</i>
<i>Sample ID</i>	WG-6029-060210-015	WG-6029-060210-016	WG-6029-060210-005	WG-6029-060210-006	WG-6029-060210-001	WG-6029-060210-002
<i>Sample Date</i>	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010
<i>Sample Type</i>		<i>Duplicate</i>		<i>Duplicate</i>		
 <i><u>Volatile Organic Compounds (ug/L)</u></i>						
1,1,1-Trichloroethane	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Acetone	ND(5.0)	ND(5.0)	9.6	9.1	13.8	ND(5.0)
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

## Notes

µg/L = micrograms per liter

ND ( ) - Not present at or above the associated value

TABLE B.3

**ANALYTICAL DATA SUMMARY  
SURFACE WATER SAMPLE  
JUNE 2010 GROUNDWATER MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD, OHIO**

<i>Sample Location</i> <i>Sample ID</i> <i>Sample Date</i> <i>Sample Type</i>	<i>S&amp;E Ditches Surface Water</i> <i>WS-6029-060210-017</i> <i>6/2/2010</i>	<i>S&amp;E Ditches Surface Water</i> <i>WS-6029-060210-018</i> <i>6/2/2010</i> <i>Duplicate</i>
<b><u>Semi-Volatile Organic Compounds (ug/L)</u></b>		
1,2,4-Trichlorobenzene	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ND(1.0)	ND(1.0)
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ND(2.0)	ND(2.0)
2,4,5-Trichlorophenol	ND(5.0)	ND(5.0)UJ
2,4,6-Trichlorophenol	ND(5.0)	ND(5.0)UJ
2,4-Dichlorophenol	ND(5.0)	ND(5.0)UJ
2,4-Dimethylphenol	ND(5.0)	ND(5.0)UJ
2,4-Dinitrophenol	ND(20)	ND(20)UJ
2,4-Dinitrotoluene	ND(2.0)	ND(2.0)
2,6-Dinitrotoluene	ND(2.0)	ND(2.0)
2-Chloronaphthalene	ND(2.0)	ND(2.0)
2-Chlorophenol	ND(5.0)	ND(5.0)UJ
2-Methylnaphthalene	ND(1.0)	ND(1.0)
2-Methylphenol	ND(2.0)	ND(2.0)UJ
2-Nitroaniline	ND(5.0)	ND(5.0)
2-Nitrophenol	ND(5.0)	ND(5.0)UJ
3&4-Methylphenol	ND(2.0)	ND(2.0)UJ
3,3'-Dichlorobenzidine	ND(5.0)	ND(5.0)
3-Nitroaniline	ND(5.0)	ND(5.0)
4,6-Dinitro-2-methylphenol	ND(20)UJ	ND(20)UJ
4-Bromophenyl phenyl ether	ND(2.0)	ND(2.0)
4-Chloro-3-methylphenol	ND(5.0)	ND(5.0)UJ
4-Chloroaniline	ND(5.0)	ND(5.0)
4-Chlorophenyl phenyl ether	ND(2.0)	ND(2.0)
4-Nitroaniline	ND(5.0)	ND(5.0)
4-Nitrophenol	ND(10)	ND(10)UJ
Acenaphthene	ND(1.0)	ND(1.0)
Acenaphthylene	ND(1.0)	ND(1.0)
Anthracene	ND(1.0)	ND(1.0)
Benzo(a)anthracene	ND(1.0)	ND(1.0)
Benzo(a)pyrene	ND(1.0)	ND(1.0)
Benzo(b)fluoranthene	ND(1.0)	ND(1.0)
Benzo(g,h,i)perylene	ND(1.0)	ND(1.0)
Benzo(k)fluoranthene	ND(1.0)	ND(1.0)
bis(2-Chloroethoxy)methane	ND(2.0)	ND(2.0)
bis(2-Chloroethyl)ether	ND(2.0)	ND(2.0)
bis(2-Ethylhexyl)phthalate	ND(2.0)	ND(2.0)
Butyl benzylphthalate	ND(2.0)	ND(2.0)
Carbazole	ND(1.0)	ND(1.0)
Chrysene	ND(1.0)	ND(1.0)
Dibenz(a,h)anthracene	ND(1.0)	ND(1.0)
Dibenzofuran	ND(5.0)	ND(5.0)
Diethyl phthalate	ND(2.0)	ND(2.0)
Dimethyl phthalate	ND(2.0)	ND(2.0)
Di-n-butylphthalate	ND(2.0)	ND(2.0)
Di-n-octyl phthalate	ND(2.0)	ND(2.0)
Fluoranthene	ND(1.0)	ND(1.0)
Fluorene	ND(1.0)	ND(1.0)
Hexachlorobenzene	ND(1.0)	ND(1.0)
Hexachlorobutadiene	ND(1.0)	ND(1.0)
Hexachlorocyclopentadiene	ND(20)	ND(20)

TABLE B.3

**ANALYTICAL DATA SUMMARY  
SURFACE WATER SAMPLE  
JUNE 2010 GROUNDWATER MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD, OHIO**

<i>Sample Location</i> <i>Sample ID</i> <i>Sample Date</i> <i>Sample Type</i>	<i>S&amp;E Ditches Surface Water</i> <i>WS-6029-060210-017</i> <i>6/2/2010</i>	<i>S&amp;E Ditches Surface Water</i> <i>WS-6029-060210-018</i> <i>6/2/2010</i> <i>Duplicate</i>
<b><u>Semi-Volatile Organic Compounds (µg/L) (cont'd)</u></b>		
Hexachloroethane	ND(2.0)	ND(2.0)
Indeno(1,2,3-cd)pyrene	ND(1.0)	ND(1.0)
Isophorone	ND(2.0)	ND(2.0)
Naphthalene	ND(1.0)	ND(1.0)
Nitrobenzene	ND(2.0)	ND(2.0)
N-Nitrosodi-n-propylamine	ND(2.0)	ND(2.0)
N-Nitrosodiphenylamine	ND(5.0)	ND(5.0)
Pentachlorophenol	ND(10)UJ	ND(10)UJ
Phenanthrene	ND(1.0)	ND(1.0)
Phenol	ND(2.0)	ND(2.0)UJ
Pyrene	ND(1.0)	ND(1.0)
<b><u>Volatile Organic Compounds (µg/L)</u></b>		
1,1,1-Trichloroethane	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ND(1.0)	ND(1.0)
1,2-Dichloroethene (total)	ND(1.0)	0.28 J
1,2-Dichloropropane	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ND(5.0)	ND(5.0)
2-Hexanone	ND(5.0)	ND(5.0)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ND(5.0)	ND(5.0)
Acetone	7.3	6.7
Benzene	ND(1.0)	ND(1.0)
Bromodichloromethane	ND(1.0)	ND(1.0)
Bromoform	ND(4.0)	ND(4.0)
Bromomethane (Methyl Bromide)	ND(2.0)	ND(2.0)
Carbon disulfide	ND(2.0)	ND(2.0)
Carbon tetrachloride	ND(1.0)	ND(1.0)
Chlorobenzene	ND(1.0)	ND(1.0)
Chloroethane	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ND(1.0)	0.28 J
cis-1,3-Dichloropropene	ND(1.0)	ND(1.0)
Dibromochloromethane	ND(1.0)	ND(1.0)
Ethylbenzene	ND(1.0)	ND(1.0)
Methylene chloride	ND(2.0)	ND(2.0)
Styrene	ND(5.0)	ND(5.0)
Tetrachloroethene	ND(1.0)	ND(1.0)
Toluene	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ND(1.0)	ND(1.0)
Trichloroethene	ND(1.0)	ND(1.0)
Vinyl chloride	ND(1.0)	ND(1.0)
Xylene (total)	ND(1.0)	ND(1.0)

**Notes**

µg/L = micrograms per liter

ND ( ) - Not present at or above the associated value

J - Estimated concentration

UJ - Estimated reporting limit

TABLE B.4

ANALYTICAL DATA SUMMARY  
SEDIMENT SAMPLE  
JUNE 2010 GROUNDWATER MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD, OHIO

	<i>Sample Location</i>	<i>S&amp;E Ditches Sediment</i>
	<i>Sample ID</i>	<i>SE-6029-060210-019</i>
	<i>Sample Date</i>	<i>6/2/2010</i>
<u><i>Semi-Volatile Organic Compounds (ug/kg)</i></u>		
1,2,4-Trichlorobenzene		ND(110)
1,2-Dichlorobenzene		ND(110)
1,3-Dichlorobenzene		ND(110)
1,4-Dichlorobenzene		ND(110)
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)		ND(110)
2,4,5-Trichlorophenol		ND(270)
2,4,6-Trichlorophenol		ND(270)
2,4-Dichlorophenol		ND(270)
2,4-Dimethylphenol		ND(270)
2,4-Dinitrophenol		ND(1,100)
2,4-Dinitrotoluene		ND(110)
2,6-Dinitrotoluene		ND(110)
2-Chloronaphthalene		ND(110)
2-Chlorophenol		ND(270)
2-Methylnaphthalene		55.4 J
2-Methylphenol		ND(110)
2-Nitroaniline		ND(270)
2-Nitrophenol		ND(270)
3&4-Methylphenol		ND(110)
3,3'-Dichlorobenzidine		ND(270)
3-Nitroaniline		ND(270)
4,6-Dinitro-2-methylphenol		ND(1,100)
4-Bromophenyl phenyl ether		ND(110)
4-Chloro-3-methylphenol		ND(270)
4-Chloroaniline		ND(270)
4-Chlorophenyl phenyl ether		ND(110)
4-Nitroaniline		ND(270)
4-Nitrophenol		ND(550)
Acenaphthene		ND(55)
Acenaphthylene		ND(55)
Anthracene		ND(55)
Benzo(a)anthracene		26.1 J
Benzo(a)pyrene		23.6 J
Benzo(b)fluoranthene		35.3 J
Benzo(g,h,i)perylene		34.2 J
Benzo(k)fluoranthene		ND(55)
bis(2-Chloroethoxy)methane		ND(110)
bis(2-Chloroethyl)ether		ND(110)
bis(2-Ethylhexyl)phthalate		ND(110)
Butyl benzylphthalate		ND(110)
Carbazole		ND(110)
Chrysene		32.2 J
Dibenz(a,h)anthracene		ND(55)
Dibenzofuran		ND(110)
Diethyl phthalate		ND(110)
Dimethyl phthalate		312
Di-n-butylphthalate		ND(110)
Di-n-octyl phthalate		ND(110)
Fluoranthene		42.1 J
Fluorene		ND(55)
Hexachlorobenzene		ND(110)
Hexachlorobutadiene		ND(55)
Hexachlorocyclopentadiene		ND(1,100)
Hexachloroethane		ND(270)
Indeno(1,2,3-cd)pyrene		ND(55)

TABLE B.4

ANALYTICAL DATA SUMMARY  
SEDIMENT SAMPLE  
JUNE 2010 GROUNDWATER MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD, OHIO

	<i>Sample Location</i>	<i>S&amp;E Ditches Sediment</i>
	<i>Sample ID</i>	<i>SE-6029-060210-019</i>
	<i>Sample Date</i>	<i>6/2/2010</i>
<u><i>Semi-Volatile Organic Compounds (µg/kg) (cont'd)</i></u>		
Isophorone		ND(110)
Naphthalene		33.2 J
Nitrobenzene		ND(110)
N-Nitrosodi-n-propylamine		ND(110)
N-Nitrosodiphenylamine		ND(270)
Pentachlorophenol		ND(550)
Phenanthrene		58.4
Phenol		ND(110)
Pyrene		48.4 J
<u><i>Volatile Organic Compounds (µg/kg)</i></u>		
1,1,1-Trichloroethane		ND(11)
1,1,2,2-Tetrachloroethane		ND(11)
1,1,2-Trichloroethane		ND(11)
1,1-Dichloroethane		ND(11)
1,1-Dichloroethene		ND(11)
1,2-Dichloroethane		ND(2.1)
1,2-Dichloroethene (total)		ND(11)
1,2-Dichloropropane		ND(11)
2-Butanone (Methyl Ethyl Ketone)		ND(21)
2-Hexanone		ND(11)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)		ND(11)
Acetone		ND(21)
Benzene		ND(2.1)
Bromodichloromethane		ND(11)
Bromoform		ND(11)
Bromomethane (Methyl Bromide)		ND(11)
Carbon disulfide		ND(11)
Carbon tetrachloride		ND(11)
Chlorobenzene		ND(11)
Chloroethane		ND(11)
Chloroform (Trichloromethane)		ND(11)
Chloromethane (Methyl Chloride)		ND(11)
cis-1,2-Dichloroethene		ND(11)
cis-1,3-Dichloropropene		ND(11)
Dibromochloromethane		ND(11)
Ethylbenzene		ND(2.1)
Methylene chloride		ND(11)
Styrene		ND(11)
Tetrachloroethene		ND(11)
Toluene		ND(2.1)
trans-1,2-Dichloroethene		ND(11)
trans-1,3-Dichloropropene		ND(11)
Trichloroethene		ND(11)
Vinyl chloride		ND(11)
Xylene (total)		ND(4.3)
<u><i>General Chemistry</i></u>		
Total solids		52.1%

## Notes

µg/kg = micrograms per kilogram

ND ( ) - Not present at or above the associated value

J - Estimated concentration

TABLE B.5

ANALYTICAL DATA SUMMARY  
 RINSE BLANKS  
 JUNE 2010 GROUNDWATER MONITORING EVENT  
 SUMMIT NATIONAL SUPERFUND SITE  
 DEERFIELD, OHIO

<i>Sample Location</i>	<i>Rinse Blank</i>	<i>Rinse Blank</i>
<i>Sample ID</i>	<i>RB-6029-060210-009</i>	<i>RB-6029-060210-013</i>
<i>Sample Date</i>	<i>6/2/2010</i>	<i>6/2/2010</i>
<b><u>Volatile Organic Compounds (µg/L)</u></b>		
1,1,1-Trichloroethane	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ND(1.0)	ND(1.0)
1,2-Dichloroethene (total)	ND(1.0)	ND(1.0)
Acetone	ND(5.0)	ND(5.0)
Benzene	ND(1.0)	ND(1.0)
Chlorobenzene	ND(1.0)	ND(1.0)
Chloroethane	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)
Ethylbenzene	ND(1.0)	ND(1.0)
Toluene	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ND(1.0)	ND(1.0)
Trichloroethene	ND(1.0)	ND(1.0)
Vinyl chloride	ND(1.0)	ND(1.0)
Xylene (total)	ND(1.0)	ND(1.0)

## Notes:

µg/L = micrograms per liter

ND ( ) - Not present at or above the associated value

TABLE B.6

ANALYTICAL DATA SUMMARY  
 TRIP BLANK  
 JUNE 2010 GROUNDWATER MONITORING EVENT  
 SUMMIT NATIONAL SUPERFUND SITE  
 DEERFIELD, OHIO

	<i>Sample Location</i>	<i>Trip Blank</i>
	<i>Sample ID</i>	<i>TB-6029-060210</i>
	<i>Sample Date</i>	<i>6/2/2010</i>
<u><i>Volatile Organic Compounds (µg/L)</i></u>		
1,1,1-Trichloroethane		ND(1.0)
1,1-Dichloroethane		ND(1.0)
1,2-Dichloroethane		ND(1.0)
1,2-Dichloroethene (total)		ND(1.0)
Acetone		ND(5.0)
Benzene		ND(1.0)
Chlorobenzene		ND(1.0)
Chloroethane		ND(1.0)
cis-1,2-Dichloroethene		ND(1.0)
Ethylbenzene		ND(1.0)
Toluene		ND(1.0)
trans-1,2-Dichloroethene		ND(1.0)
Trichloroethene		ND(1.0)
Vinyl chloride		ND(1.0)
Xylene (total)		ND(1.0)

## Notes:

µg/L = micrograms per liter

ND ( ) - Not present at or above the associated value

**ATTACHMENT C**

**DATA QUALITY ASSESSMENT**





**CONESTOGA-ROVERS  
& ASSOCIATES**

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## MEMORANDUM

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TO: Steve Whillier  
FROM: Nancy Bergstrom/ko/36 *S. Day free*  
C.C.: Steve Day  
Eric Mannlein  
RE: Data Quality Assessment and Validation  
June 2010 Annual Monitoring Event  
Summit National Superfund Site  
Deerfield Township, Portage County, Ohio

REF. NO.: 006029-50  
DATE: July 19, 2010

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The following summarizes the results of the data quality assessment and validation conducted for the samples collected during June 2010 at the Summit National Superfund Site in Deerfield Township, Portage County, Ohio (Site). The samples identified in Table 1 were selectively analyzed for Site-specific indicator parameter list (SSIPL) and target compound list (TCL) volatile organic compounds (VOCs) and TCL semivolatile organic compounds (SVOCs) by Accutest Laboratories, Inc. of Dayton, New Jersey. The methods of analysis are identified in Table 2. The data quality evaluation criteria were established by the Site-specific quality assurance project plan (QAPP).<sup>1</sup>

### Sample Receipt and Holding Time Period Compliance

All samples were received by the laboratory intact, properly preserved, within the proper temperature range, and with the required chain-of-custody documentation. However, sample WG-6029-060210-018 was re-extracted for SVOC analysis after the holding time period had expired because the laboratory suspected the acid-extractable surrogate compounds had not been added to the sample prior to the original extraction. Although the SVOC results reported for the re-extracted sample were the same as the original SVOC results and the acid-extractable surrogates compounds exhibited acceptable recoveries, the acid-extractable SVOC results reported for the sample were qualified as estimated for holding time period compliance violation. All remaining samples were prepared and analyzed within the holding time periods specified in the QAPP.

### Method Blank Sample Data

Method blank sample data were evaluated to verify that analytes detected in investigative samples were not attributable to laboratory conditions or procedures. Target analytes were not detected in the method blank samples.

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<sup>1</sup>Application of data quality evaluation criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

### Surrogate Compounds Data

Method performance on individual samples was evaluated by the percent recovery data from surrogate compounds spiked into each sample prior to preparation and analysis. The acid-extractable surrogate compounds were not recovered from the original SVOC analysis of sample WG-6029-060210-018. The analysis of a re-extraction of the sample yielded acceptable surrogate compounds percent recovery data, but the sample was re-extracted after the holding time period had expired. The acid-extractable SVOC results reported for this sample were qualified as estimated for holding time period compliance violation, and additional data qualification was not required. The surrogate compounds percent recovery acceptance criteria was achieved for the remaining samples.

### Blank Spike Sample Analyses

Analytical accuracy was evaluated by the percent recovery data from blank spike sample analyses. The blank spike percent recovery data were acceptable for all analytes.

### Matrix Spike/Matrix Spike Duplicate Sample Analyses

Accuracy and precision relative to the sample matrices were evaluated by percent recovery and RPD data from matrix spike/matrix spike duplicate (MS/MSD) sample analyses. The 4,6-dinitro-2-methylphenol and pentachlorophenol percent recovery data reported for MS/MSD sample WG-6029-060210-017 failed to achieve the acceptance criteria. The qualified associated investigative sample data are presented in Table 3. The remaining percent recovery and RPD data were acceptable for project-related MS/MSD samples or investigative sample data associated with outlying MS/MSD data did not require qualification.

### Sample Quantitation

VOC and SVOC results reported at concentrations less than their sample-specific reporting limits but greater than or equal to their respective method detection limits were flagged by the laboratory with the "J" qualifier. Results flagged as such are estimated concentrations, and the data validation "J" qualifier was applied to these results during the data validation process.

### Field Quality Assurance/Quality Control

Field quality assurance measures included the analysis of equipment rinse blank, field duplicate, and trip blank samples.

The effectiveness of the field decontamination procedure was evaluated by the data from the analysis of equipment rinse blank samples. Target analytes were not detected in the equipment rinse blank samples, indicating the decontamination procedure was effective.

Overall precision of the sampling and analysis event was evaluated by the data from the analyses of field duplicate samples that were submitted blindly to the laboratory. Table 4 summarizes the results of, and RPDs calculated for, analytes detected in the investigative and field duplicate samples. The RPD data indicate overall precision was acceptable.

A trip blank sample was included in the shipping cooler containing investigative aqueous samples being submitted for VOC analysis to monitor for sample cross-contamination by VOCs during sample shipping and storage. VOCs were not detected in the trip blank sample.

#### Completeness

The objective for completeness, which is defined in the QAPP as the total number of usable sample results versus the total possible number of sample results, was required to be at least 95%. All investigative sample results were usable, and the completeness objective was attained.

#### Overall Assessment

The data are suitable for their intended purpose with the qualifications presented herein.

**TABLE 1**

**SAMPLE IDENTIFICATION AND LOCATION SUMMARY  
JUNE 2010 ANNUAL MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD TOWNSHIP, PORTAGE COUNTY, OHIO**

<i>Sample ID</i>	<i>Location</i>
WG-6029-060210-001	MW-220
WG-6029-060210-002	MW-224
WG-6029-060210-003	MW-108
WG-6029-060210-004	MW-107
WG-6029-060210-005	MW-209
WG-6029-060210-006	MW-209 (Dupl.)
WG-6029-060210-007	MW-114
WG-6029-060210-008	MW-111
RB-6029-060210-009	Equipment Rinse Blank
WG-6029-060210-010	MW-113
WG-6029-060210-011	MW-11
WG-6029-060210-012	MW-4
RB-6029-060210-013	Equipment Rinse Blank
WG-6029-060210-014	MW-115
WG-6029-060210-015	MW-207
WG-6029-060210-016	MW-207 (Dupl.)
WS-6029-060210-017	Surface Water - South & East Ditches
WS-6029-060210-018	Surface Water - South & East Ditches (Dupl.)
SE-6029-060210-019	Sediment South & East Ditches
TB-6029-060210	Trip Blank

**TABLE 2**

**SUMMARY OF ANALYTICAL METHODS  
JUNE 2010 ANNUAL MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD TOWNSHIP, PORTAGE COUNTY, OHIO**

<i>Parameter</i>	<i>Analytical Method</i> <sup>1</sup>
Volatile Organic Compounds (VOCs)	SW-846 8260B
Semivolatile Organic Compounds (SVOCs)	SW-846 8270C

<sup>1</sup> Method references:  
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA SW-846,  
3rd Edition with Updates I through IIIB.

**TABLE 3**

**SUMMARY OF SAMPLE DATA QUALIFIED FOR VIOLATION OF  
MATRIX SPIKE/MATRIX SPIKE DUPLICATE ACCEPTANCE CRITERIA  
JUNE 2010 ANNUAL MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD TOWNSHIP, PORTAGE COUNTY, OHIO**

<i>Analyte</i>	<i>Associated Samples</i>	<i>Qualifier</i> <sup>1</sup>
4,6-Dinitro-2-methylphenol	WS-6029-060210-017	UJ
	WS-6029-060210-018	UJ
Pentachlorophenol	WS-6029-060210-017	UJ
	WS-6029-060210-018	UJ

<sup>1</sup> The sample results are qualified as:

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

**TABLE 4**

**SUMMARY OF DETECTED ANALYTES  
FIELD DUPLICATE SAMPLES  
JUNE 2010 ANNUAL MONITORING EVENT  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD TOWNSHIP, PORTAGE COUNTY, OHIO**

<i>Analyte</i>	<i>Investigative Sample</i> WG-6029-060210-005	<i>Duplicate Sample</i> WG-6029-060210-006	<i>RPD</i> <sup>1</sup>
Acetone	9.6	9.1	5.3

<i>Analyte</i>	<i>Investigative Sample</i> WS-6029-060210-017	<i>Duplicate Sample</i> WS-6029-060210-018	<i>RPD</i>
Acetone	7.3	6.7	8.6
cis-1,2-Dichloroethene	ND (1.0) <sup>2</sup>	0.28 J <sup>3</sup>	NC <sup>4</sup>
1,2-Dichloroethene (total)	ND (1.0)	0.28 J	NC

<sup>1</sup> RPD - Relative Percent Difference

<sup>2</sup> ND ( ) - Not detected at associated value

<sup>3</sup> J - Estimated concentration

<sup>4</sup> NC - Not Calculable

**ATTACHMENT D**

**GROUNDWATER CONTOURS**



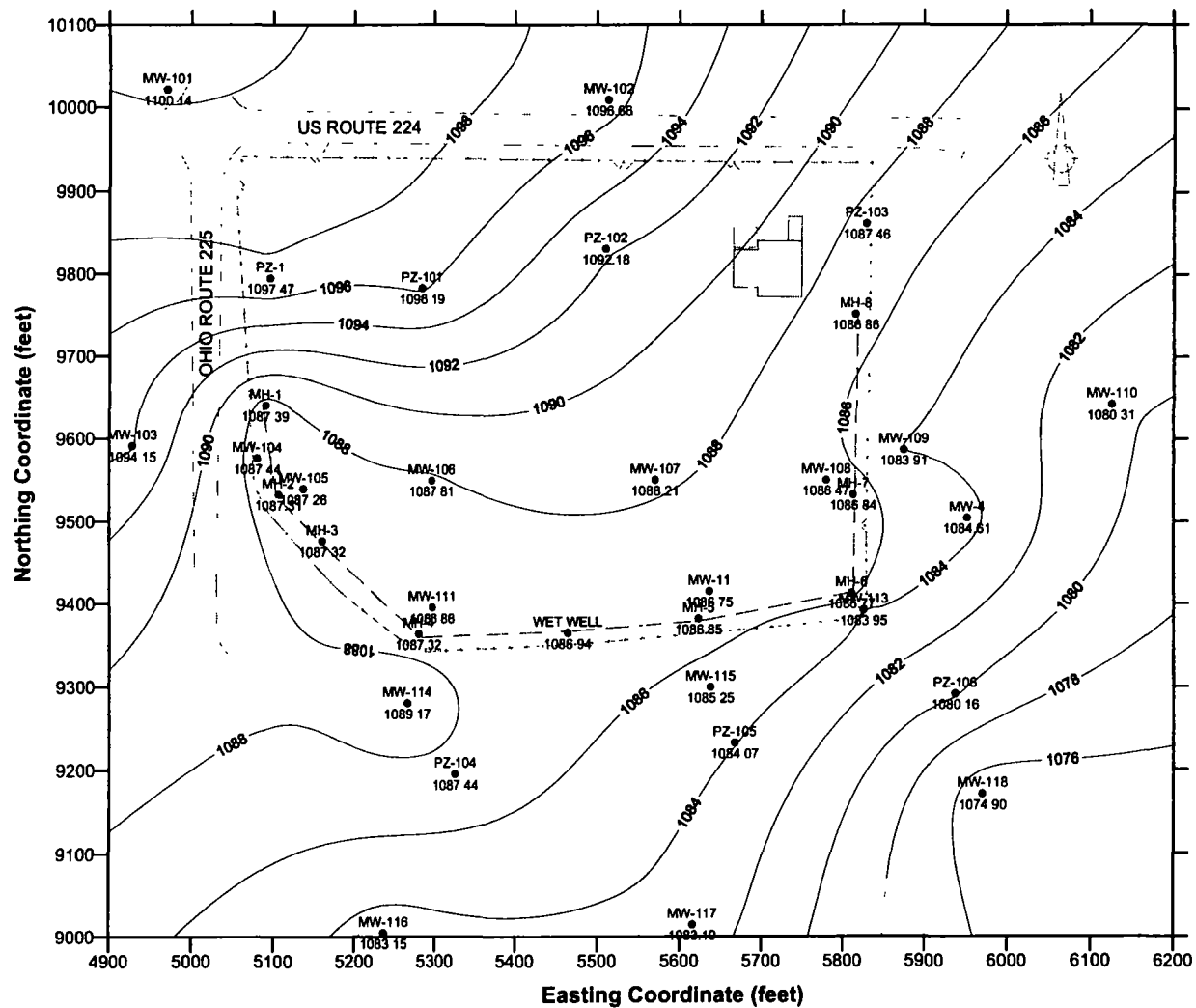


figure D.1  
GROUNDWATER CONTOURS  
WATER TABLE UNIT -- JUNE 2, 2010  
SUMMIT NATIONAL SUPERFUND SITE  
Deerfield, Ohio



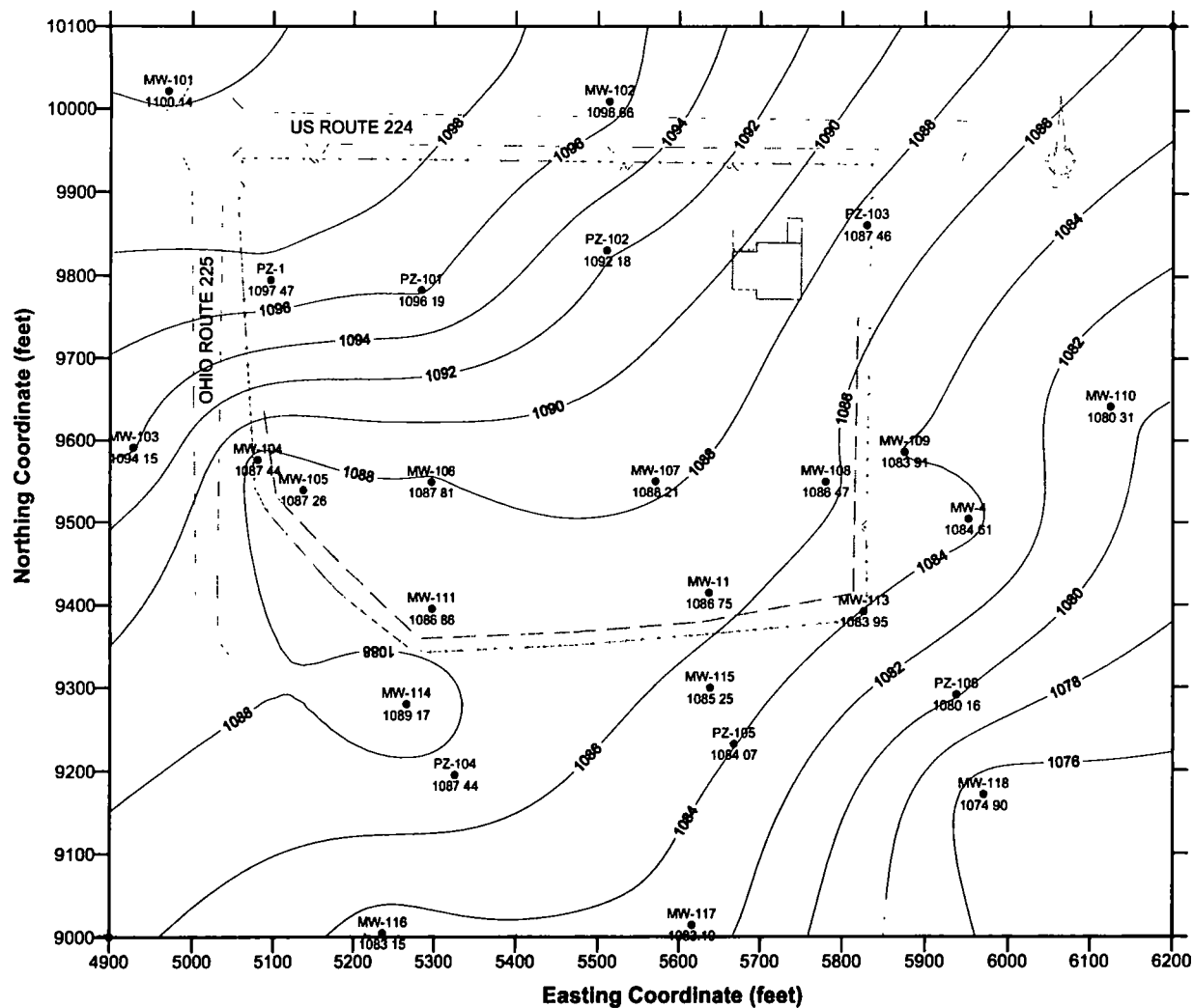


figure D.2  
GROUNDWATER CONTOURS  
WATER TABLE UNIT (w/o MANHOLES) -- JUNE 2, 2010  
SUMMIT NATIONAL SUPERFUND SITE  
Deerfield, Ohio



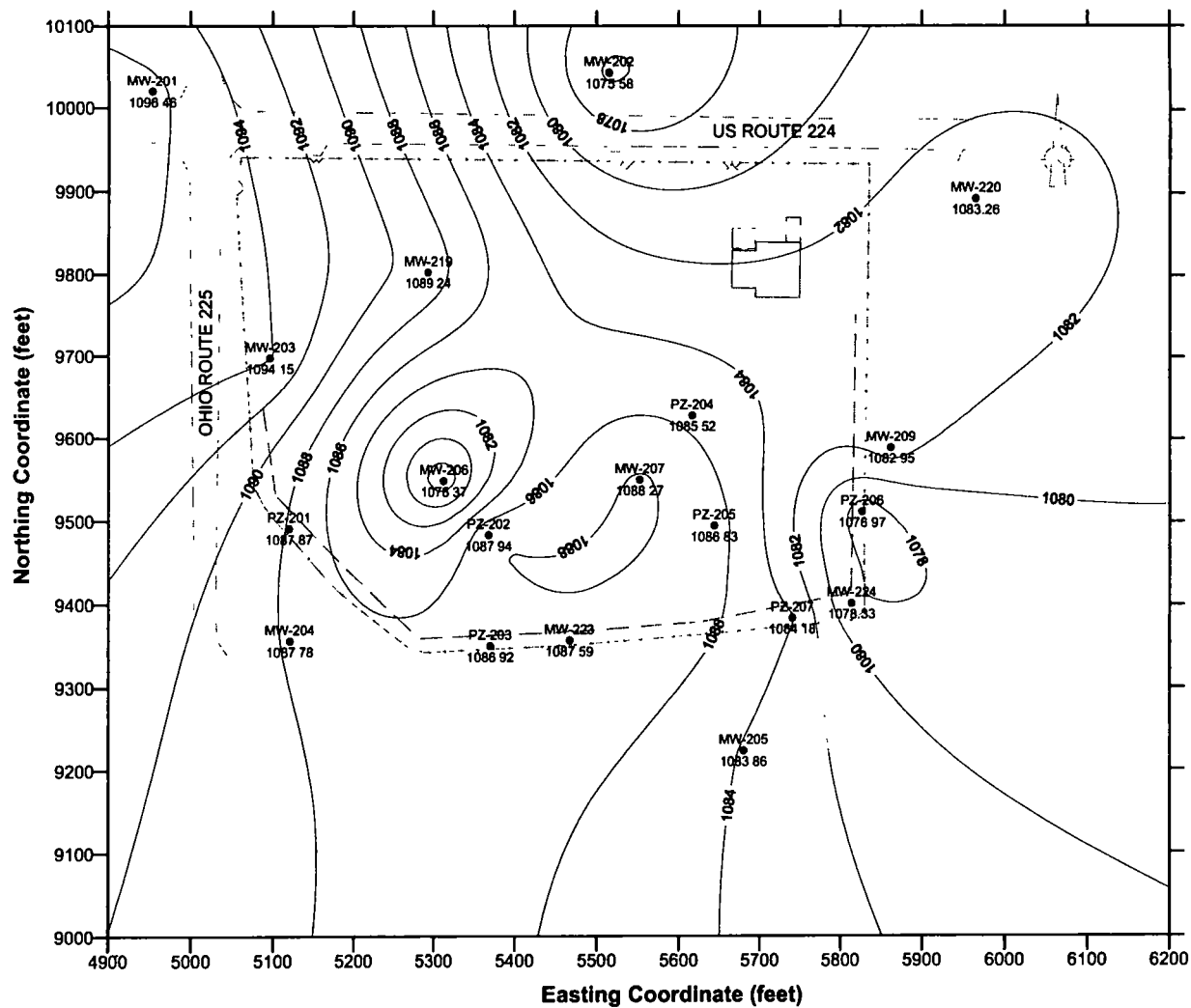


figure D.3  
GROUNDWATER CONTOURS  
UPPER INTERMEDIATE UNIT -- JUNE 2, 2010  
SUMMIT NATIONAL SUPERFUND SITE  
Deerfield, Ohio



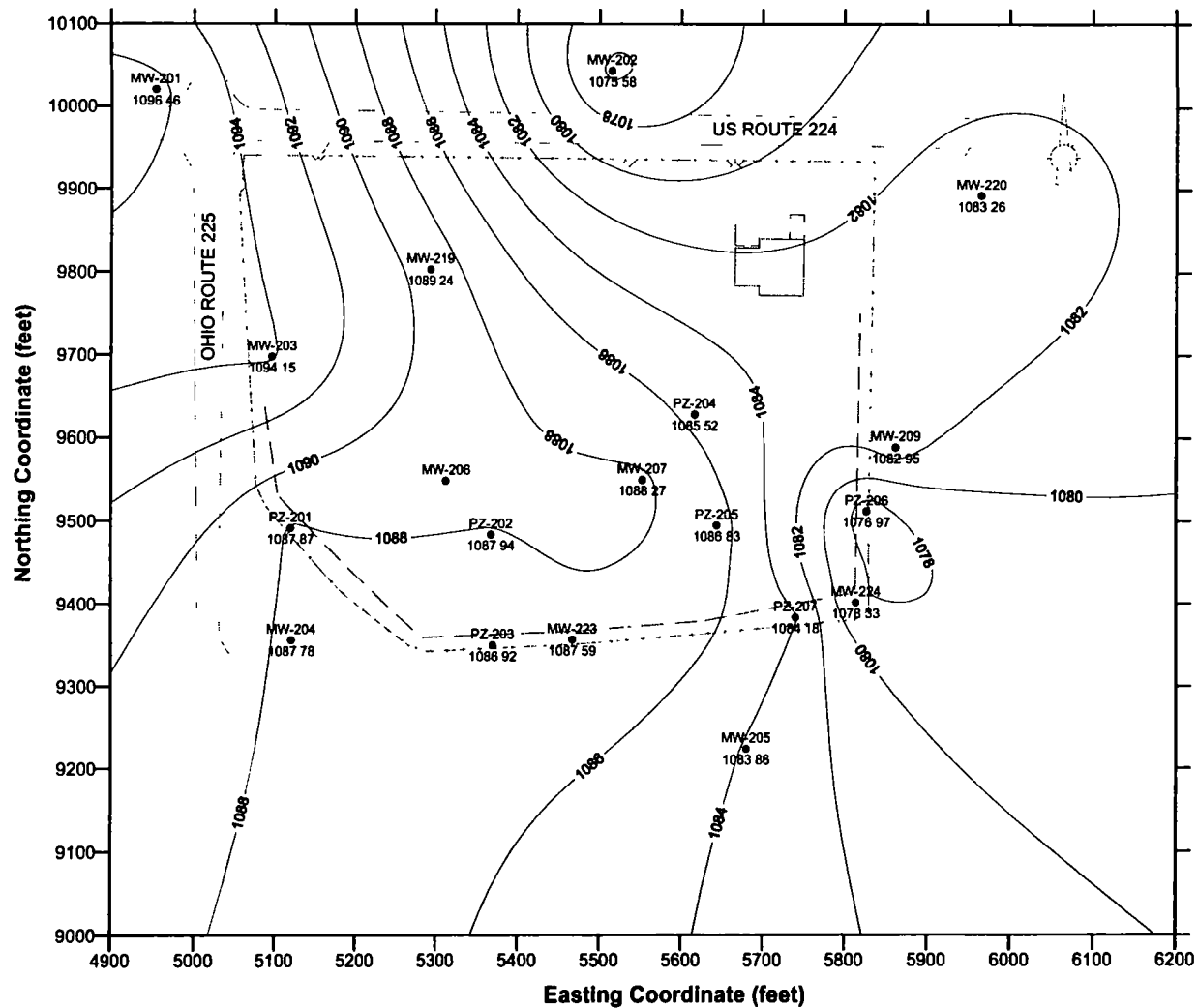


figure D.4  
 GROUNDWATER CONTOURS  
 UPPER INTERMEDIATE UNIT (w/o MW-206) -- JUNE 2, 2010  
 SUMMIT NATIONAL SUPERFUND SITE  
 Deerfield, Ohio



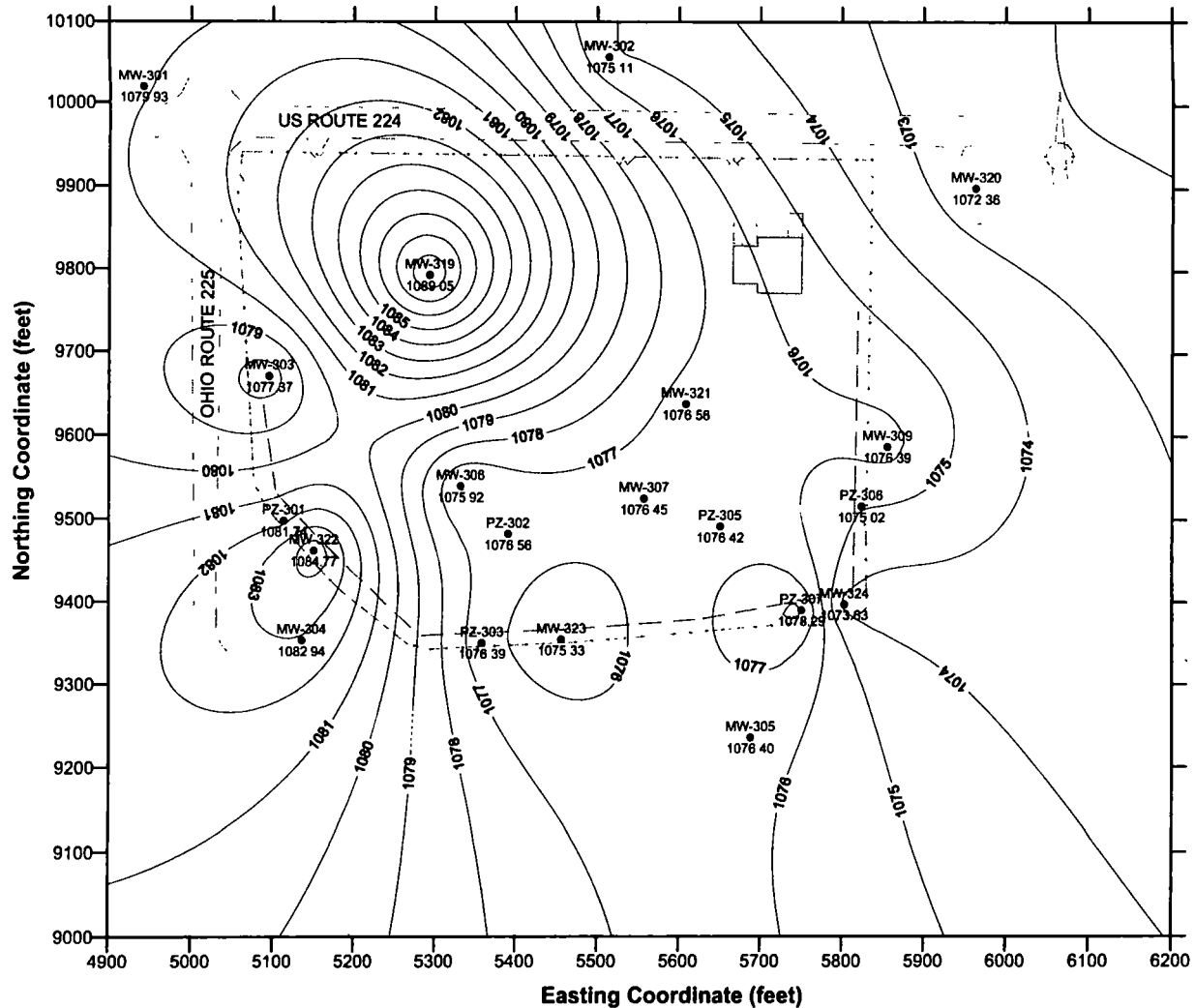


figure D.5  
 GROUNDWATER CONTOURS  
 LOWER INTERMEDIATE UNIT -- JUNE 2, 2010  
 SUMMIT NATIONAL SUPERFUND SITE  
 Deerfield, Ohio



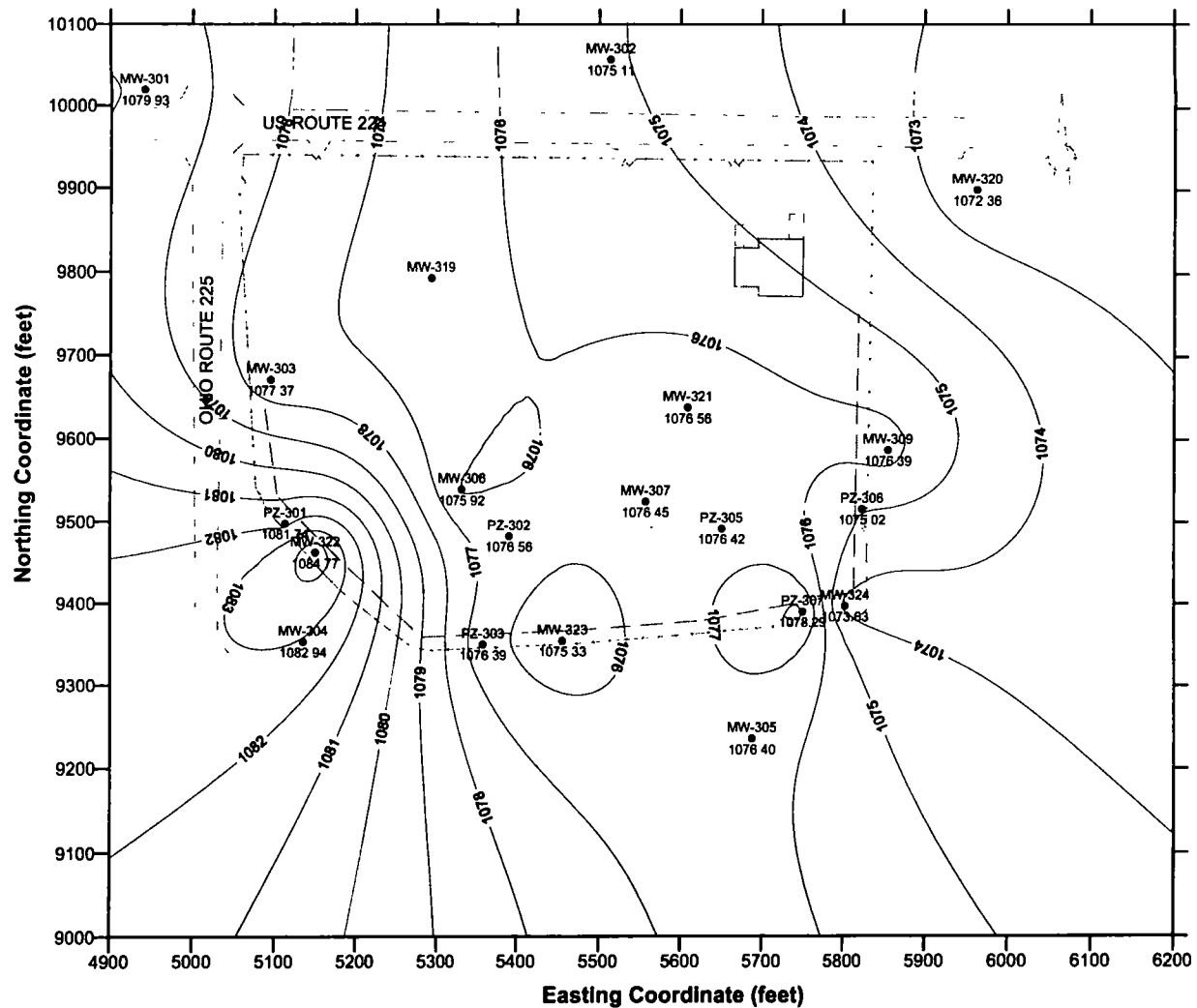


figure D.6  
 GROUNDWATER CONTOURS  
 LOWER INTERMEDIATE UNIT - (w/o MW-319) -- JUNE 2, 2010  
 SUMMIT NATIONAL SUPERFUND SITE  
 Deerfield, Ohio



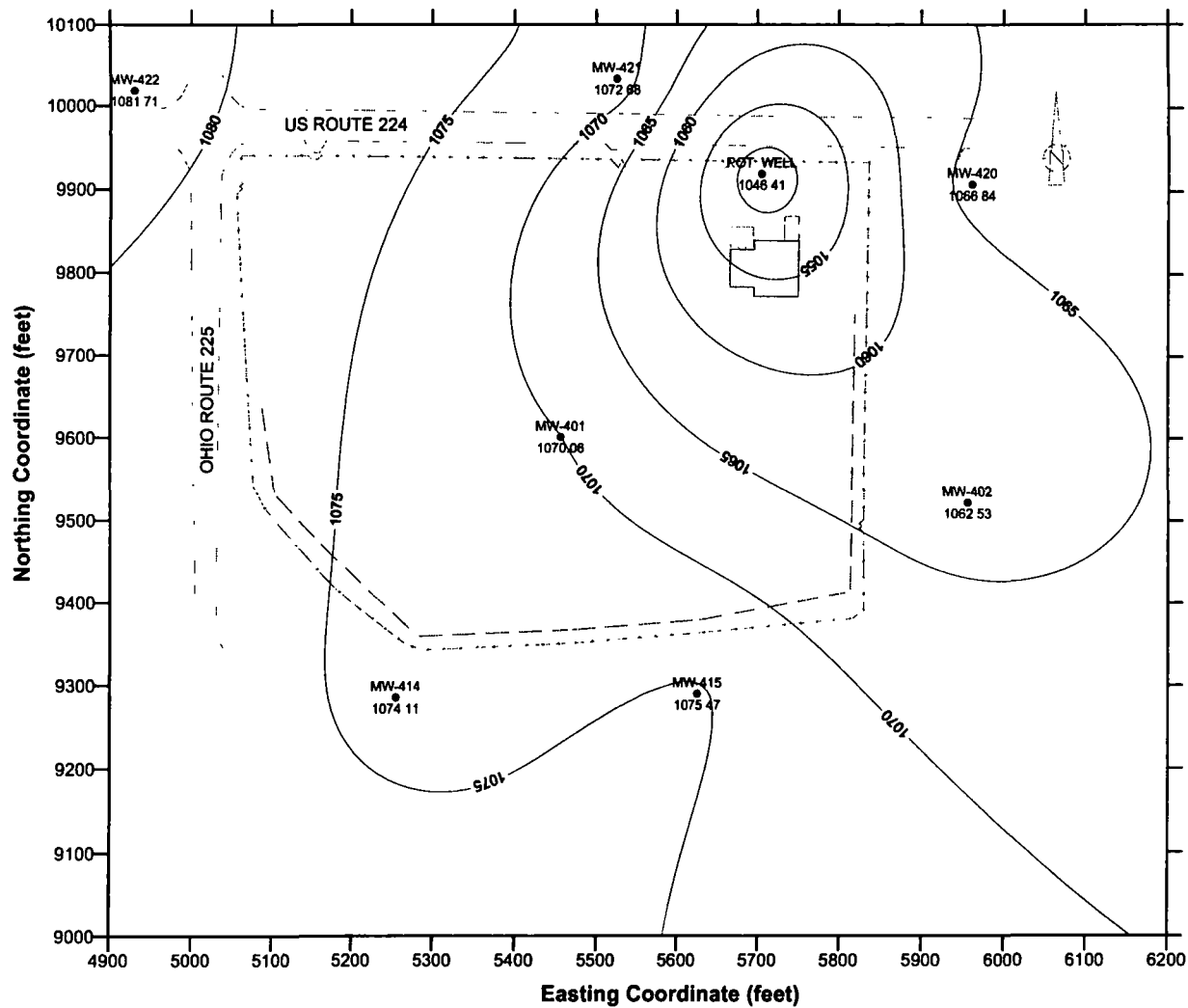


figure D.7  
GROUNDWATER CONTOURS  
UPPER SHARON UNIT -- JUNE 2, 2010  
SUMMIT NATIONAL SUPERFUND SITE  
Deerfield, Ohio



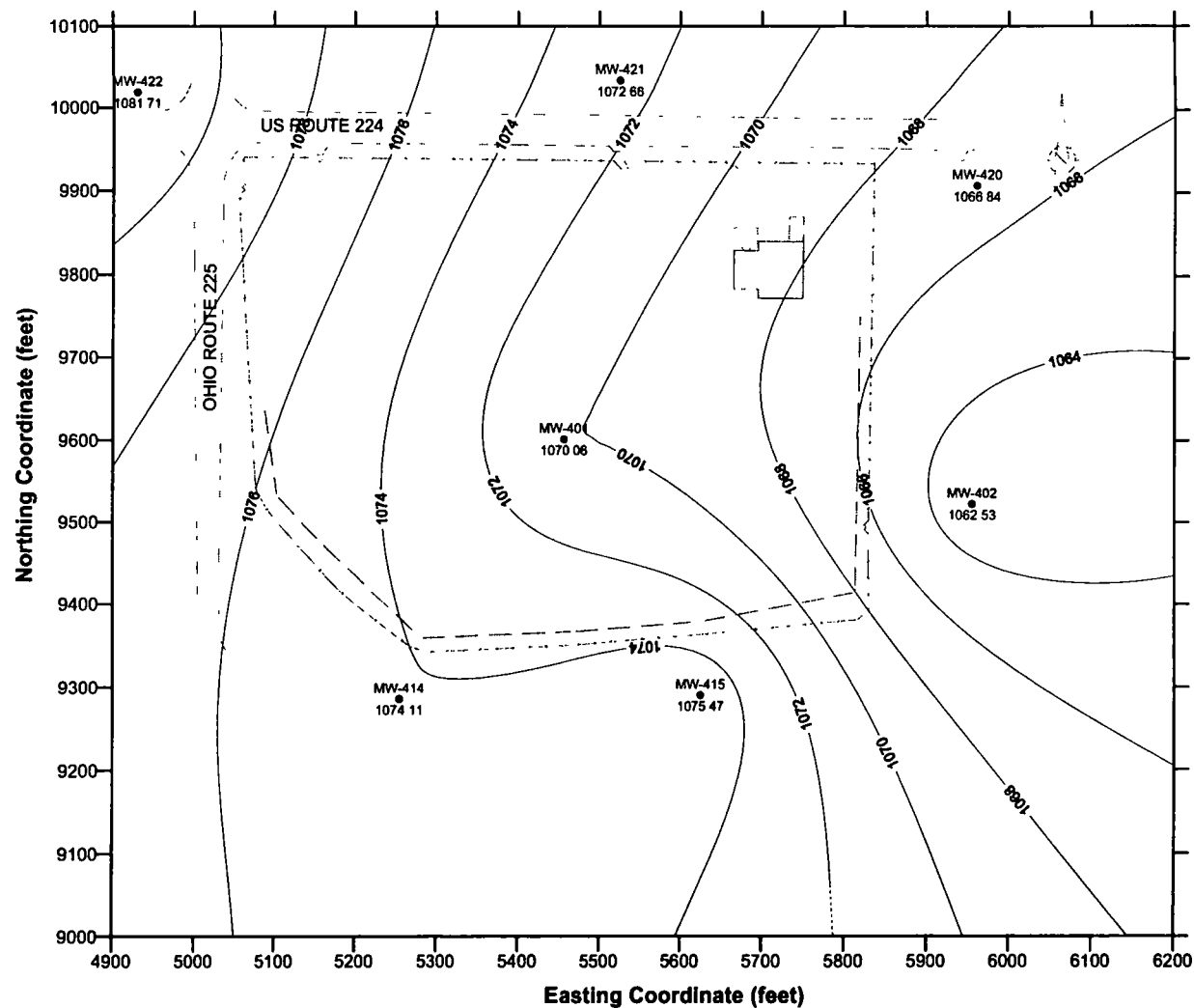


figure D.8  
 GROUNDWATER CONTOURS  
 UPPER SHARON UNIT (w/o POTABLE WELL) -- JUNE 2, 2010  
 SUMMIT NATIONAL SUPERFUND SITE  
 Deerfield, Ohio





TABLE D.1  
GROUNDWATER LEVEL DATA SUMMARY  
NOVEMBER 2005 TO JUNE 2010  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD, OHIO

Well	Reference Elevation	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated	Depth To	Calculated
		28-Nov-05	Groundwater Elevation 28-Nov-05	20-Feb-06	Groundwater Elevation 20-Feb-06	30-May-06	Groundwater Elevation 30-May-06	14-Aug-06	Groundwater Elevation 14-Aug-06	20-Dec-06	Groundwater Elevation 20-Dec-06	25-May-07	Groundwater Elevation 25-May-07	12-Nov-07	Groundwater Elevation 12-Nov-07	15-Apr-08	Groundwater Elevation 15-Apr-08	4-Nov-08	Groundwater Elevation 4-Nov-08	20-Apr-09	Groundwater Elevation 20-Apr-09	2-Jun-10	Groundwater Elevation 2-Jun-10
Water Table Unit Wells																							
MW-4	1,091.09	6.94	1,084.15	6.24	1,084.85	6.62	1,084.47	7.55	1,083.54	6.55	1,084.54	7.36	1,083.73	8.47	1,082.62	6.31	1,084.78	8.57	1,082.52	6.22	1,084.87	6.48	1,084.61
MW-11	1,095.93	9.92	1,086.01	9.49	1,086.44	9.57	1,086.36	10.1	1,085.83	9.43	1,086.50	9.87	1,086.06	10.29	1,085.64	9.08	1,086.85	10.41	1,085.52	9.12	1,086.81	9.18	1,086.75
MW-101	1,107.57	8.51	1,099.06	7.75	1,099.82	7.85	1,099.72	8.61	1,098.96	7.81	1,099.76	8.51	1,099.06	9.04	1,098.53	7.43	1,100.14	9.51	1,098.06	7.48	1,100.09	7.43	1,100.14
MW-102	1,100.17	4.72	1,095.45	4.04	1,096.13	4.04	1,096.13	4.58	1,095.59	4.02	1,096.15	4.71	1,095.46	5.36	1,094.81	3.70	1,096.47	5.79	1,094.38	3.47	1,096.70	3.51	1,096.66
MW-103	1,096.22	2.35	1,093.87	2.31	1,093.91	2.52	1,093.70	3.38	1,092.84	2.40	1,093.82	2.89	1,093.33	2.94	1,093.28	2.00	1,094.22	3.16	1,093.06	1.78	1,094.44	2.07	1,094.15
MW-104	1,099.81	13.38	1,086.43	12.82	1,086.99	12.91	1,086.90	13.51	1,086.30	12.44	1,087.37	13.23	1,086.58	13.69	1,086.12	12.21	1,087.60	13.94	1,085.87	12.40	1,087.41	12.37	1,087.44
MW-105	1,101.32	14.98	1,086.34	14.40	1,086.92	14.30	1,087.02	15.08	1,086.24	14.29	1,087.03	14.89	1,086.43	15.34	1,085.98	13.92	1,087.40	15.61	1,085.71	14.03	1,087.29	14.06	1,087.26
MW-106	1,102.88	16.04	1,086.84	15.28	1,087.60	15.37	1,087.51	16.06	1,086.82	15.36	1,087.52	15.91	1,086.97	16.51	1,086.37	14.81	1,088.07	16.83	1,086.05	14.91	1,087.97	15.07	1,087.81
MW-107	1,098.27	10.94	1,087.33	9.96	1,088.31	10.06	1,088.21	10.64	1,087.63	9.98	1,088.29	10.91	1,087.36	11.63	1,086.64	9.64	1,088.63	12.21	1,086.06	9.77	1,088.50	10.06	1,088.21
MW-108	1,091.96	5.98	1,085.98	5.90	1,086.06	5.85	1,086.11	6.23	1,085.73	5.83	1,086.13	6.30	1,085.66	6.42	1,085.54	5.48	1,086.48	6.54	1,085.42	5.39	1,086.57	5.49	1,086.47
MW-109	1,087.42	3.92	1,083.50	3.24	1,084.18	3.54	1,083.88	4.42	1,083.00	3.54	1,083.88	4.34	1,083.08	5.69	1,081.73	3.09	1,084.33	6.35	1,081.07	2.93	1,084.49	3.51	1,083.91
MW-110	1,086.87	10.75	1,076.12	6.68	1,080.19	7.13	1,079.74	10.28	1,076.59	7.03	1,079.84	8.37	1,078.50	11.51	1,075.36	5.66	1,081.21	12.26	1,074.61	5.83	1,081.04	6.56	1,080.31
MW-111	1,099.67	13.57	1,086.10	13.10	1,086.57	13.18	1,086.49	13.75	1,085.92	13.16	1,086.51	13.52	1,086.15	13.91	1,085.76	12.72	1,086.95	14.12	1,085.55	12.76	1,086.91	12.81	1,086.86
MW-113	1,088.46	6.61	1,081.85	5.42	1,083.04	5.88	1,082.58	7.22	1,081.24	5.53	1,082.93	6.39	1,082.07	7.66	1,080.80	4.02	1,084.44	7.92	1,080.54	4.96	1,083.50	4.51	1,083.95
MW-114	1,097.27	9.24	1,088.03	8.93	1,088.34	8.84	1,088.43	9.94	1,087.33	8.82	1,088.45	9.39	1,087.88	9.63	1,087.64	8.28	1,088.99	10.11	1,087.16	8.09	1,089.18	8.10	1,089.17
MW-115	1,101.83	17.55	1,084.28	17.16	1,084.67	17.20	1,084.63	17.70	1,084.13	17.12	1,084.71	17.36	1,084.47	17.80	1,084.03	16.60	1,085.23	17.93	1,083.90	16.63	1,085.20	16.58	1,085.25
MW-116	1,105.54	23.58	1,081.96	23.13	1,082.41	23.02	1,082.52	22.96	1,082.58	22.98	1,082.56	23.26	1,082.28	23.88	1,081.66	21.92	1,083.62	24.46	1,081.08	22.14	1,083.40	22.39	1,083.15
MW-117	1,123.97	44.25	1,079.72	41.95	1,082.02	42.74	1,081.23	45.32	1,078.65	41.81	1,082.16	42.94	1,081.03	46.16	1,077.81	40.29	1,083.68	47.92	1,076.05	40.83	1,083.14	40.78	1,083.19
MW-118	1,098.38	25.05	1,073.33	23.96	1,074.42	23.47	1,074.91	25.06	1,073.32	23.44	1,074.94	24.11	1,074.27	26.21	1,072.17	23.13	1,075.25	27.51	1,070.87	23.43	1,074.95	23.48	1,074.90
PZ-1	1,104.43	8.28	1,096.15	7.52	1,096.91	7.63	1,096.80	8.09	1,096.34	7.60	1,096.83	8.32	1,096.11	8.88	1,095.55	6.91	1,097.52	9.27	1,095.16	6.61	1,097.82	6.96	1,097.47
PZ-101	1,108.53	13.62	1,094.91	12.74	1,095.79	12.85	1,095.68	13.37	1,095.16	12.77	1,095.76	13.46	1,095.07	14.13	1,094.40	12.35	1,096.18	14.51	1,094.02	12.22	1,096.31	12.34	1,096.19
PZ-102	1,100.21	9.18	1,091.03	8.35	1,091.86	8.27	1,091.94	8.83	1,091.38	8.29	1,091.92	9.02	1,091.19	9.92	1,090.29	7.92	1,092.29	10.36	1,089.85	7.92	1,092.29	8.03	1,092.18
PZ-103	1,093.98	6.62	1,087.36	6.00	1,087.98	6.40	1,087.58	7.14	1,086.84	6.34	1,087.64	7.16	1,086.82	8.75	1,085.23	6.35	1,087.63	9.43	1,084.55	6.12	1,087.86	6.52	1,087.46
PZ-104	1,097.54	11.50	1,086.04	10.57	1,086.97	10.55	1,086.99	11.81	1,085.73	10.43	1,087.11	11.62	1,085.92	12.43	1,085.11	10.03	1,087.51	13.37	1,084.17	10.06	1,087.48	10.10	1,087.44
PZ-105	1,101.60	20.26	1,081.34	18.51	1,083.09	18.88	1,082.72	20.91	1,080.69	18.90	1,082.70	19.38	1,082.22	21.65	1,079.95	17.22	1,084.38	23.11	1,078.49	17.56	1,084.04	17.53	1,084.07
PZ-106	1,102.23	25.03	1,077.20	23.01	1,079.22	22.78	1,079.45	23.86	1,078.37	22.69	1,079.54	23.04	1,079.19	25.41	1,076.82	21.48	1,080.75	26.91	1,075.32	22.14	1,080.09	22.07	1,080.16
Upper Intermediate Unit Wells																							
MW-201	1,107.52	12.38	1,095.14	11.81	1,095.71	12.22	1,095.30	12.54	1,094.98	12.17	1,095.35	12.64	1,094.88	12.52	1,095.00	10.72	1,096.80	12.78	1,094.74	11.21	1,096.31	11.06	1,096.46
MW-202	1,099.50	28.49	1,071.01	26.07	1,073.43	25.22	1,074.28	28.10	1,071.40	25.19	1,074.31	27.50	1,072.00	26.91	1,072.59	23.00	1,076.50	28.61	1,070.89	23.27	1,076.23	23.92	1,075.58
MW-203	1,103.35	10.32	1,093.03	9.59	1,093.76	9.72	1,093.63	10.22	1,093.13	9.66	1,093.69	10.79	1,092.56	10.68	1,092.67	8.73	1,094.62	10.91	1,092.44	9.32			